CLAIMS

1. A fuel reforming apparatus for taking out a hydrogen gas from a hydrogen-containing fuel fluid, comprising:

a catalyst passage formed with a catalyst unit with which said fuel fluid runs in contact; and

local irradiation means for locally irradiating light on said catalyst passage.

2. The fuel reforming apparatus according to Claim 1, wherein said local irradiation means is a laser beam emitting device irradiating a laser beam.

3. The fuel reforming apparatus according to Claim 1, wherein said local irradiation means is a UV light emitting device irradiating UV light.

4. The fuel reforming apparatus according to Claim 1, wherein a laser beam emitting device irradiating a laser beam and a UV light emitting device irradiating UV light are provided as said local irradiation means.

5. The fuel reforming apparatus according to Claim 1, wherein said local irradiation means has irradiation change means for changing a region where irradiated with light.

6. The fuel reforming apparatus according to Claim 1, wherein said local irradiation means has output

control means for controlling an output of light irradiated from said local irradiation means.

7. A method for reforming a fuel wherein a hydrogen gas is taken out from a hydrogen-containing fuel fluid, comprising:

passing said fuel fluid to a catalyst passage formed with a catalyst unit therein;

locally irradiating light on said catalyst passage; and

taking out a hydrogen gas from said fuel fluid that is in contact with said catalyst unit in a region of said catalyst passage where irradiated with the light.

8. The fuel reforming method according to Claim 7, wherein the light irradiated on said catalyst unit is a laser beam.

9. The fuel reforming method according to Claim 7, wherein the light irradiated on said catalyst unit is UV light.

10. The fuel reforming method according to Claim 7, wherein a laser beam and UV light are used in combination as the light irradiated on said catalyst unit.

11. The fuel reforming method according to Claim 7, wherein a region of said catalyst unit which is irradiated with the light is changed.

12. The fuel reforming method according to Claim 7, wherein an output of the light irradiated on said catalyst unit is controlled to control an amount of hydrogen gs taken out from said fuel fluid.